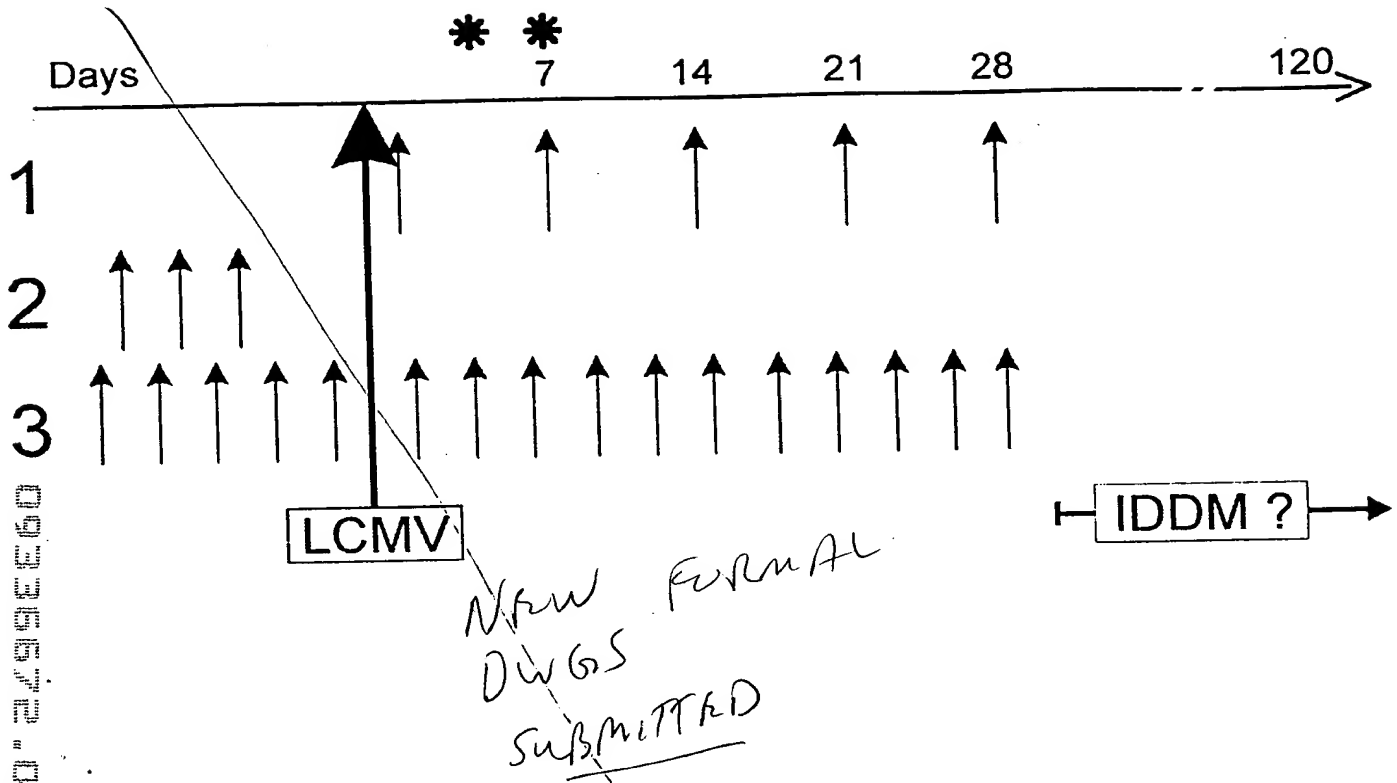

Figure 1. DNA immunization protocols.

Constructs were generated as described in the method section, and plasmid injections were given intramuscularly into the quadriceps femoris muscle on each side (2x50µg in 50µl saline) per injection, by one of the three protocols shown above. The asterisks denote times at which LCMV-specific CTL responses were evaluated (see text). The development of IDDM was followed for >3 months post-LCMV infection.

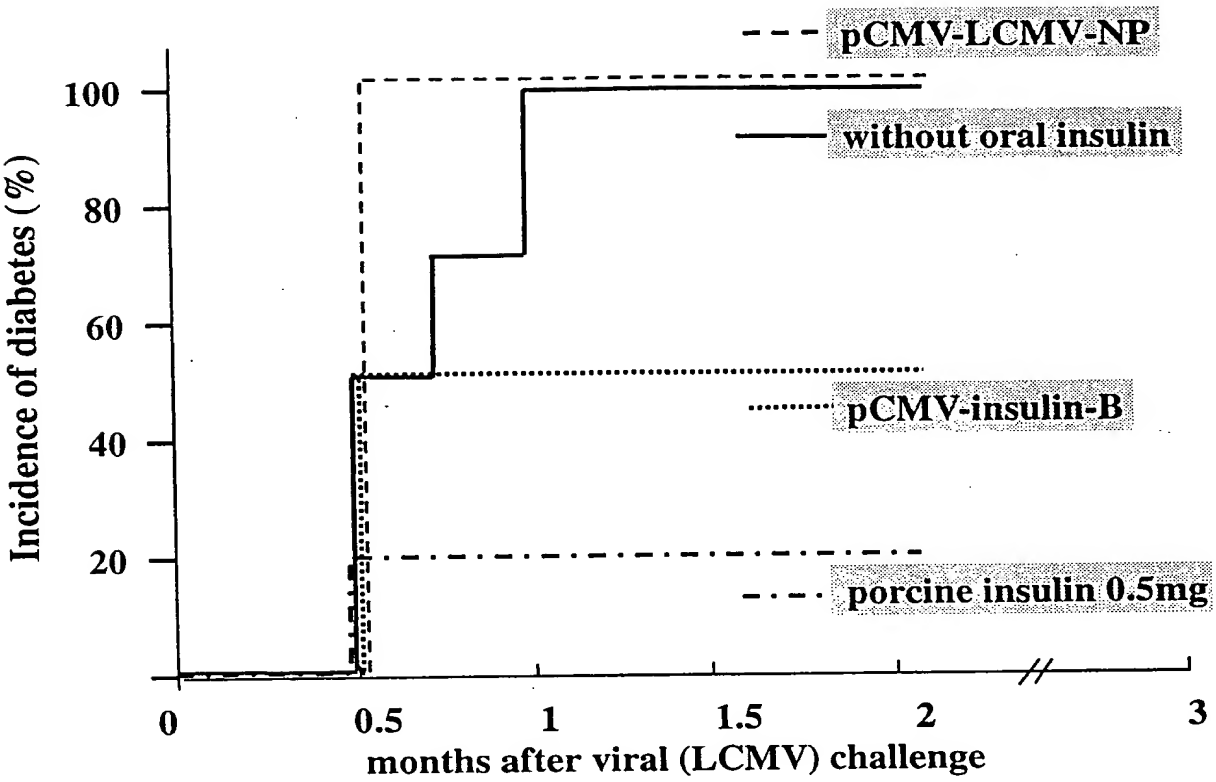

Figure 2. Immunization with DNA plasmids expressing the insulin B chain, but not the LCMV NP, is effective in preventing IDDM in RIP-NP mice

RIP-NP transgenic mice were treated with pCMV-NP (protocols 1, 2 or 3, Figure 1) with pCMV-ins-B (protocol 1, Figure 1) or were fed oral porcine insulin (see method section). Diabetes was measured weekly by Accucheck (see method section), the total observation period was 3 months. Group sizes were as follows: 10 mice pCMV-B, 10 mice pCMV-NP, 5 mice oral porcine insulin (see also ref[5]), 10 mice untreated controls. Definition of diabetes is blood glucose consistently >350 mg/dl.

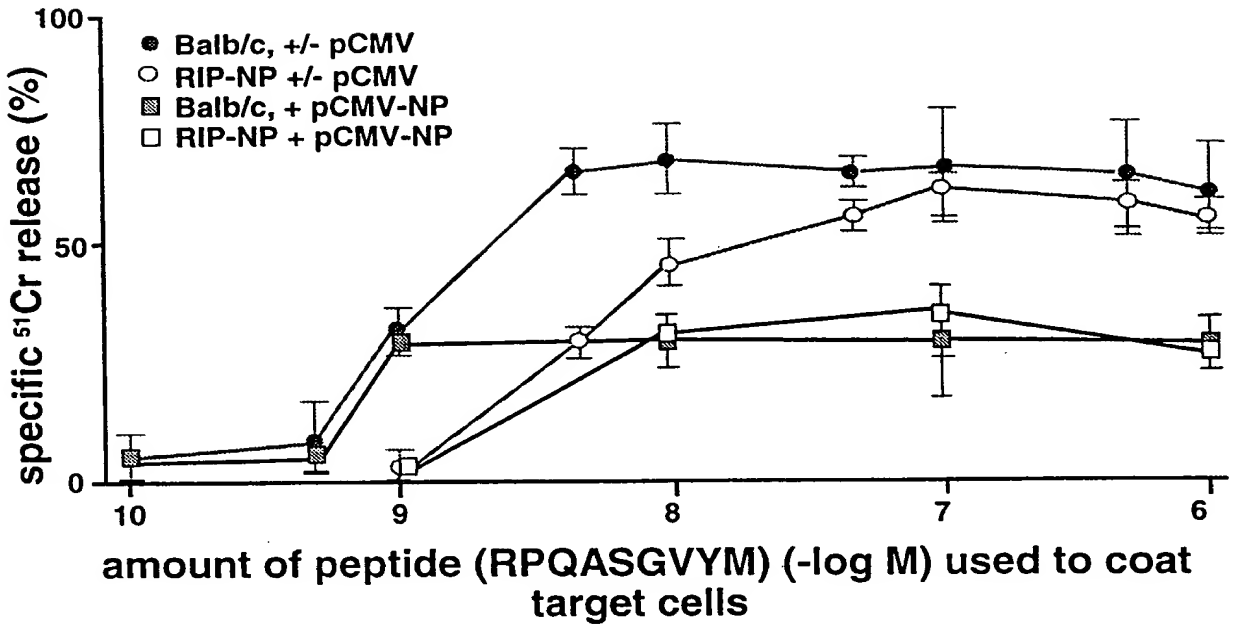

Figure 3. Affinities of NP-specific CTL following DNA immunization

Affinities of LCMV-NP CTL were determined by using serial log dilutions of LCMV-NP H-2^{d} peptide on syngeneic Balb/c targets in a 5 hour ^{51}Cr release assay. The overall plateau release was decreased in pCMV-NP treated groups compared to pCMV treated controls, however, the fall-off of the curve was not shifted, indicating that there were no significant affinity differences. Decrease in CTL numbers was confirmed by pCTL analysis as shown in table 1. Three mice per group were injected with pCMV or pCMV-NP according to protocol 2, Figure 1.